

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-19, 27, and 35-41 are pending in the application, with 1, 9, 10, 11, 35, 36, and 41 being the independent claims. Claims 9, 10, 19, 27, and 35 have been withdrawn from consideration. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 1-7, 11-17, and 36-41 have been rejected under 35 U.S.C. § 102(a,e) as being anticipated by J.A. Sheena et al., U.S. Patent No. 6,049,777 (Sheena). Sheena does not teach or suggest each and every feature of amended independent claims 1, 11, 36, and 41.

Applicants' claim 1, as amended, recites "generating a sparse unary ratings matrix from a user's selected preferences, wherein said user's selected performances are represented as binary data in said sparse unary ratings matrix." Applicants' claim 11, as amended, recites "generating a sparse unary ratings matrix, wherein said sparse unary ratings matrix includes ratings data represented as binary data." Claims 36 and 41 recite "a unary array of entries that can be arithmetically manipulated, wherein data in the unary array of entries is binary data."

The Office Action alleges that the recited features of the independent claims are taught by Sheena. We respectfully disagree. As described in Applicants' specification, a unary ratings matrix includes unary data which "indicates a ratings data in which there

are only two types of information: positive and no information. Such data sources are usually encoded with rating values of either zero or one..." (Specification, p. 9, lines 11-13). Therefore, in the claimed sparse unary ratings matrix and unary array of entries, ratings data is represented as binary data. In contrast, Sheena builds data structures that are not unary and are not binary representations of inputs. In Sheena "user profiles" and "item profiles" comprise the ratings matrix. These profiles are built from profile data entered by the user. As described in Sheena, during the profile process "the user simply submits a list of items and ratings assigned to those items..." (Sheena, col. 4, lines 7-9). Sheena further explains that:

ratings for items which are received from users can be of any form that allows users to record subjective impressions of items...For example, items may be rated on an alphabetic scale ("A" to "F") or a numerical scale (1 to 10)

(Sheena, col. 4, lines 21-25).

Accordingly, Sheena does not teach or suggest at least "wherein said user's selected performances are represented as binary data in said sparse unary ratings matrix," as recited in amended independent claim 1, "wherein said sparse unary ratings matrix includes ratings data represented as binary data," as recited in amended independent claim 11, or "a unary array of entries that can be arithmetically manipulated, wherein data in the unary array of entries is binary data," as recited in amended independent claim 36 and 41.

For at least the above reasons, amended independent claims 1, 11, 36, and 41 are patentable over Sheena. Claims 2-7 are dependent on independent claim 1, claims 12-17 are dependent on independent claim 11, and claims 37-40 are dependent on independent claim 36. For at least these reasons, dependent claims 2-7, 12-17, and 37-40 are also

patentable over the cited reference. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 8 and 18 were rejected under 35 U.S.C. §103 as being allegedly unpatentable over Sheena in view of J. Schwinger, "The Geometry of Quantum States", (Schwinger).

Claim 8 depends from claim 1 and claim 18 depends from claim 11. Schwinger does not overcome the deficiencies in Sheena, relative to claims 1 and 11 described above. For at least this reasons, and further in view of their recited features, claims 8 and 18 are patentable over the Sheena and Schwinger. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

A handwritten signature in black ink, appearing to read "Lori A. Gordon". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Lori A. Gordon
Attorney for Applicants
Registration No. 50,633

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1100 New York Avenue, N.W.
Washington, D.C. 20005-3934
(202) 371-2600